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USING OF INFORMATIONAL TECHNOLOGIES FOR INDEPENDENT SOLUTION OF TASKS IN PHYSICS BY FUTURE ENGINEERS-TEACHERS OF COMPUTER PROFILE

The ability to solve tasks particularly in physics – requirements of successful professional preparation of future engineers-teachers. This professional quality contributes to the qualitative performance of engineering-pedagogical and research activities. The comparative analysis of solving industrial engineering and pedagogical tasks in physics shows that they have a common structure, the same list of knowledge and skills which must know in the process of solving any tasks. The existence of such community during solving tasks in physics allows students to acquire the general approach to solution of all tasks and use skills which are necessary for work with business objectives. In this regard in the conditions of the development of information technologies and taking into consideration the specifics of the specialty of future engineers-teachers of computer profile, the special importance is paid to the problem of practical lessons in general physics. The training of engineers-teachers of computer profile must be done on the base of modern informational technologies as a means of organization and increasing of productivity of students' educational activity.

The aim of the article is to outline the abilities of using in educational process electronic textbook for independent solving tasks in "General Physics " for students of engineering-pedagogical specialities of computer profile.

The analysis of the literature has allowed to define the following requirements which are necessary for educational electronic textbooks: 1) electronic textbook should be used not only to teach the discipline, it should be as a means of study methods and ways of work with other informational systems; 2) electronic textbook should combine the capabilities of reference and information systems and systems of automatized control and study; 3) electronic textbook, unlike paper, has to take into consideration individual characteristics of each student with the help of variable presentation of material and organization of feedback; 4) electronic textbook should give opportunities for development of additional components of different purposes and their integration into the care environment. According to following requirements, we have created electronic textbooks for independent solving of tasks in "General Physics " for students of engineering- pedagogical specialities of computer profile.

The textbook has been done according to educational programm in "General Physics" for students of engineering-pedagogical specialities of computer profile of Berdyansk state pedagogical university and covers the following topics of the discipline as "Mechanics. Molecular physics and thermodynamics", " Electricity and Magnetism", "Optics and atomic physics". For successful forming at students skills to solve tasks the textbook has the menu "Methods of solving tasks" which described in detail way the method of content analysis, a brief recording condition of the task; find ways of solving;

implementation of the solution, checking its accuracy; the analysis of task's solution. This allowed students to pay attention on the same algorithm for solving each task in physics.

The using of electronic textbook for solving tasks in "General Physics" in the educational process allows to solve the following educational targets: 1) to free up your time in class for communication teacher with students; 2) individualize work of students in extracurricular time during independent work with educational material; 3) Students independently using an electronic textbooks can solve tasks and test your knowledge; 4) work with electronic textbook, thanks to its didactic possibilities its structural components allows to combine and optimize main components of assimilation: perception and comprehension of study material, developing abilities to solve common taskss and acquiring some experience of research work.